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Artifact Type Code: Z

U.S. Patent 5,895,346

The
United
States
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The Commissioner of
Patents and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

J. Todd Tschumi

Acting Commissioner of Patents and Trademarks

Melvinia Gary
Attest



US005895346A

United States Patent [19]

Wells et al.

[11] **Patent Number:** 5,895,346[45] **Date of Patent:** Apr. 20, 1999[54] **AUTOMATIC MULTIPLE-DECANTING CENTRIFUGE**[76] **Inventors:** John R. Wells, 4372 Keystone Ave., Culver City, Calif. 90232; Steven M. Gann, 2807 Oregon Ct., Suite E-1, Torrance, Calif. 90503[21] **Appl. No.:** 08/944,179[22] **Filed:** Oct. 6, 1997**Related U.S. Application Data**

[62] Division of application No. 08/435,662, May 5, 1995, Pat. No. 5,707,331.

[51] **Int. Cl.⁶** B04B 5/02[52] **U.S. Cl.** 494/37[58] **Field of Search** 494/13, 14, 16, 494/17, 20, 32, 33, 35, 37, 85; 210/781, 782[56] **References Cited****U.S. PATENT DOCUMENTS**

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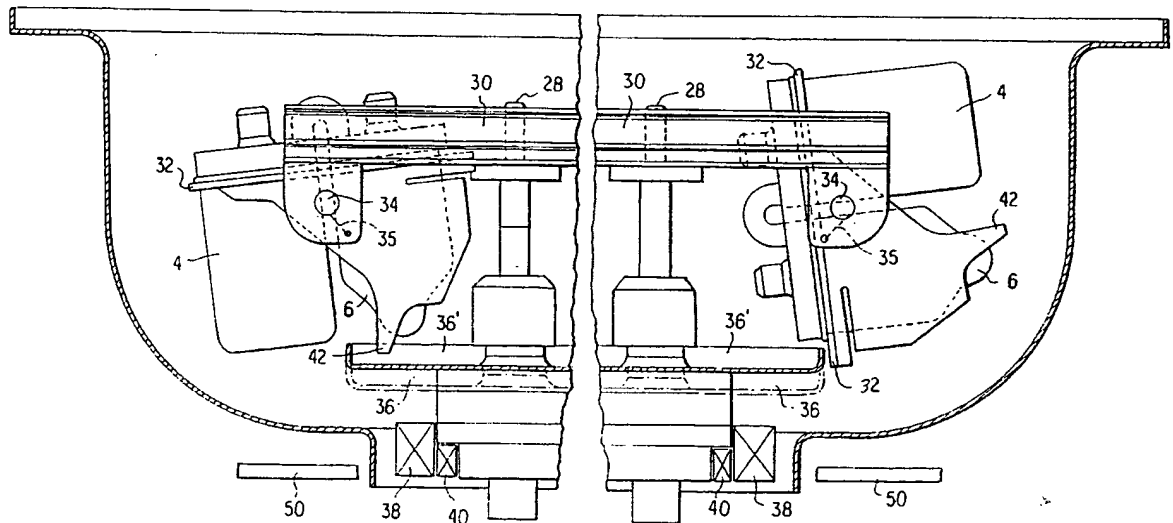
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Primary Examiner—Charles E. Cooley
Attorney, Agent, or Firm—Dickinson Wright PLLC[57] **ABSTRACT**

A centrifuge is capable of holding a sample container in selected orientations, either during or after centrifugation, to drain supernatants between two or more chambers of the container. The draining may be gravity or centrifugal draining. This allows an automated process to subject a sample to a first physical or chemical treatment to produce a first supernatant, the first supernatant to be subjected to a second physical or chemical treatment, and a second supernatant to be separated from a desired component.

31 Claims, 3 Drawing Sheets

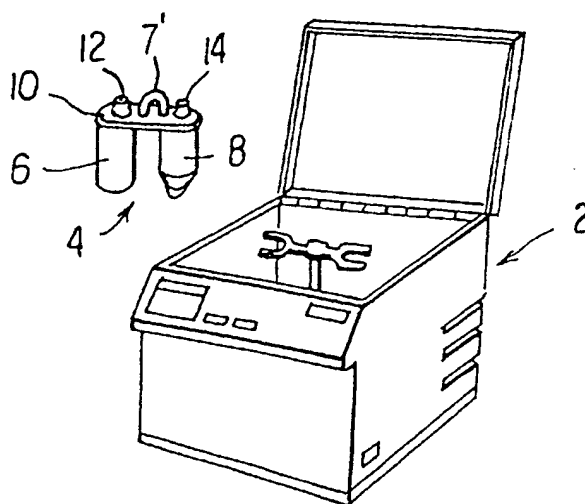


FIG. 1

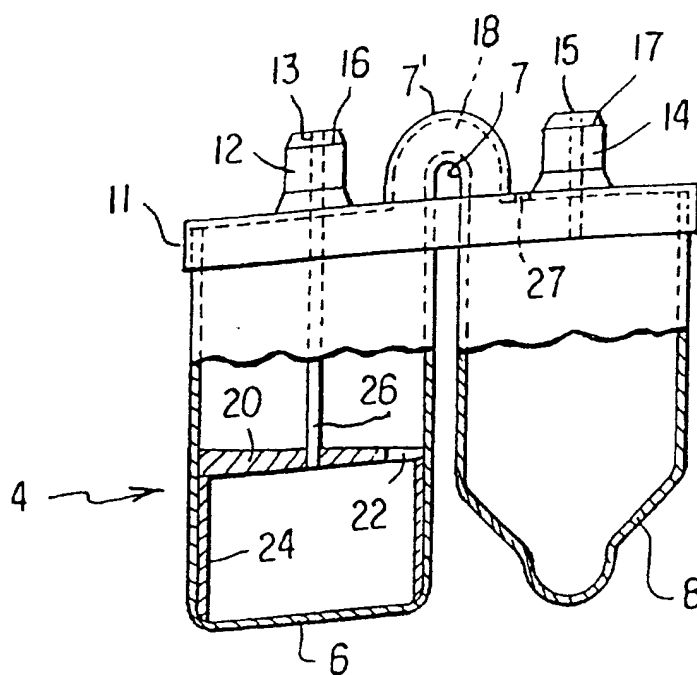


FIG. 2